

Patent
82478-5200

IN THE CLAIMS:

1. (Currently Amended) A ~~compact self-ballasted~~ fluorescent lamp, comprising:
- an arc tube having a double-spiral construction including a glass tube at least partially bent wound from a middle to both ends thereof around one axis, and electrodes sealed at both ends of the glass tube, each electrode including a filament coil; and
- a holder having a pair of insertion openings formed therein, and holding the arc tube by fixing the ends of the glass tube inserted through the insertion openings,
- wherein the ends of the glass tube are inserted to such positions that enable each filament coil to be positioned within the holder, and a minimum distance L1, in an insertion direction of the ends of the glass tube, between each filament coil and an edge of corresponding one of the insertion openings is in a range of 0 to 10 mm inclusive.
2. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 1, wherein
- mercury is singly enclosed in the glass tube, and
- an inner diameter of the glass tube is in a range of 5 to 9 mm inclusive.
3. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 1, further comprising
- a globe covering the arc tube,
- wherein the arc tube is thermally connected to the globe via a heat conductive medium, at a coolest position of the arc tube during lighting, or a position in a vicinity of the coolest position.
4. (Cancelled)

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5. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 1,
wherein

an amount of 2 to 5 mg inclusive of mercury is enclosed in the glass tube.

6. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 4,
wherein

a pitch of (a) each of both end parts of the glass tube and (b) an adjacent spiral
part in a direction of the axis is larger than a pitch of other adjacent spiral parts, to widen a gap
between each end part and the adjacent spiral part.

7. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 5,
wherein

a winding pitch of the glass tube is changed to enlarge at such a position back
from each end by 60 to 120° inclusive with respect to the axis, as viewed in the direction of the
axis.

8. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 5,
wherein

a gap between the other adjacent spiral parts is in a range of 1 to 3 mm inclusive,
and

a distance between (a) a first point that is on each end and (b) a second point that
faces the first point and that is on an outer surface of an adjacent spiral part in the direction of the
axis, is in a range of 3 to 6 mm inclusive.

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9. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 4,
wherein

an annular outer diameter of the arc tube with the double-spiral construction is in
a range of 30 to 40 mm inclusive.

10. (Currently Amended) The ~~compact self-ballasted~~ fluorescent lamp of Claim 3,
wherein

the holder is in a cylindrical shape and has an end wall where the insertion
openings are formed,

the compact self-ballasted fluorescent lamp further comprises a case that is fit to
cover a circumferential wall of the holder, and

the globe is fixed in a state where an opening end thereof is fit in a gap formed
between the circumferential wall of the holder and the case[[.]].

the glass tube is wound around the axis from [[the]] a turning part to both ends of
the glass tube.

11. - 12. (Cancelled)

13. (New) A compact self-ballasted fluorescent lamp, comprising:

an arc tube including a glass tube at least partially bent, and electrodes sealed at
both ends of the glass tube, each electrode including a filament coil;

a holder having a pair of insertion openings formed therein, and holding the arc
tube by fixing the ends of the glass tube inserted through the insertion openings,

wherein the ends of the glass tube are inserted to such positions that enable each
filament coil to be positioned within the holder, and a minimum distance L1, in an insertion

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direction of the ends of the glass tube, between each filament coil and an edge of corresponding one of the insertion openings is in a range of 0 to 10 mm inclusive; and

a globe covering the arc tube,

wherein the arc tube is thermally connected to the globe via a heat conductive medium, at a coolest position of the arc tube during lighting, or a position in a vicinity of the coolest position.

14. (New) The compact self-ballasted fluorescent lamp of Claim 13, wherein

the holder is in a cylindrical shape and has an end wall where the insertion openings are formed,

the compact self-ballasted fluorescent lamp further comprises a case that is fit to cover a circumferential wall of the holder, and

the globe is fixed in a state where an opening end thereof is fit in a gap formed between the circumferential wall of the holder and the case wherein the glass tube is wound around the axis from a turning part to both ends of the glass tube.